PROJECT REPORT

ON

MEDLAC PLUS

By

KEVAL SHAH	**(21012250210280)**
VRAJ SHAH	**(21012250210298)**
SHUBHAM SEERWANI	**(21012250210311)**
RUDRA SHUKLA	**(21012250210312)**
UTTAM SHUKLA	**(21012250210313)**
JAY SOLANKI	**(21012250210321)**

DEPARTMENT OF COMPUTER ENGINEERING

LJ POLYTECHNIC, AHMEDABAD

2023-2024

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2023-2024

CERTIFICATE

Date:__/___/____

This is to certify that **KEVAL SHAH**, **VRAJ SHAH**, **SHUBHAM SEERWANI**, **RUDRA SHUKLA**, **UTTAM SHUKLA** And **JAY SOLANKI** from LJ POLYTECHNIC having Enrollment NO. **21012250210280**, **21012250210298**, **21012250210311**, **21012250210312**, **21012250210313** And **21012250210321** have completed project documentation on the problem definition of semester V during the academic year 2023-24 having Title MEDLAC PLUS in a group consisting of 6 persons.

Institute Guide **Head of the Department**

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KEVAL SHAH (21012250210280)
VRAJ SHAH (21012250210298)
SHUBHAM SEERWANI (21012250210311)
RUDRA SHUKLA (21012250210312)
UTTAM SHUKLA (21012250210313)
JAY SOLANKI (21012250210321)

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ABSTRACT

In Today's world of digitalisation still in the field of Medical the doctor prescription is provided on the paper which increases usage of paper that leads to the effect on the environment and also increases the risk of patient health due to the misconception of doctor's prescription which may leads to dangerous health factors and unpleasant side effects. To overcome the above problem, the system is developed for health care in which paper-based medical records are replaced by the ***E-prescription*** *in which the system is developed in which doctors are able to retrieve the patient's medical records in split second which makes it superior to the paper-based medical records and helps the doctor to know the past history and treat the disease and prescribe the medication and monitor the routine health of the respective patients which can avoid some medical errors like giving the improper proscription or mismatching someone else's prescription. Since this E-prescription go directly connects to the pharmacy electronically so patient do not have to carry and track a piece of paper. Patient are priorly acknowledged through the E-prescription which will reduce the readmission of the Medical Drugs with authorization of* ***eRX*** *of respective doctor.*

CHAPTER-1
INTRODUCTION

1.1 Need of the system

- Paper charting increases the amount of time office staff spend recording information as they often need to interpret as well as manually re-enter patient health or financial information.
- Paper records can be destroyed and impossible to recover in the event of a physical disaster like a fire, floor, or worse.

1.2 Detailed problem definition

- One of the main benefits of the E- Prescription application is that it lists all past prescription records of the patient with a single click.
- System alerts inform prescribers about allergies, potential drug interactions and other issues that indicate that a particular drug use is not suitable for treatment.
- The application also helps to track this information much more easily, and the institutions using the application also have a drug monitoring system.
- Since paper prescriptions are small, they can easily be lost in E-Prescription software however, prescriptions go directly to the pharmacy electronically.
- Digital prescriptions are even more clear and precise for the pharmacy representative to interpret.

1.3 Viability of the system

- As the E-prescription (Health Card) is developed in aspect of the three factors as listed below: -

  1. Admin

  2. Doctors

  3. Patient

  4. Receptionist

  5. Chemist

  So, the Read and Write permission will give to the primary user i.e., doctor so that he can track the history past history as well as prescribe the medication and drugs according to the diseases

- The next authority to access the respective data is given to the both pharmacy as well as the Patient (User) i.e., the Read only permission of the data so that pharmacist can read the corresponding prescription of that respective patient and means of the user he/she have to carry only a pocket friendly smart health card for the consultancy as well to track the previous prescription for the better the competence of health care system.

1.4 Presently available system for the same

- These are some hospitals in India which maintains the patient's data and consultancy only through the patient's registered mobile number for limited period
- https://www.apollotelehealth.com/

  The apollo group of hospital is one of the largest group in field of the health care and medical where the patient's last visit is stored as well as the consultant doctor's name with his category of consult is maintained through their registered mobile number. The prescription work is done on paper base.

- https://www.manipalhospitals.com/

  The Manipal group of medical is one of the largest institutes which provides the facility of the booking the appointment of the respective doctor with offline as well as the online 24/7 from the remotable place.

1.5 Future Perspective

- The feature where the user will be known about medical bio-data of an individual and his license.
- The feature of Live photo Capturing of both patient and the doctor for the verification and safety concern of the their respective.
- Phone calls remainder and notification remainder will be given to the patient as prescribed by the doctor.
- Order medicines and Labs Tests online for hassle free and get it delivered at home from licensed pharmacies.
- Online Consultations which helps to Consult qualified and registered doctors on chat for free.

CHAPTER-2
ANALYSIS

2.1 Requirement analysis

- As per the required system the system has been divided into 5 different modules as listed below:

  1. Admin

  2.Doctor

  3.Chemist

  4.Patient

  5.Receptionist

  1. PATIENT: The main privileges given to the patient is only the "Read only privilege" where the user can come to know his whole profile As well as the prescription data of his past consultancy of the respective doctor through the registered phone number and app which Also preserved in the His/her E-Prescription Health card.

  - The next functionality of the patient module is that the registered user/patient can come to know about his medical information Such as blood type, chronic disease, allergies, health history, past consultancy with the prescribed medication.
  - Patient is able to book an early appointment through book appointment feature and can also contact Receptionist to book appointment for respective patient.

2. DOCTOR: The primary privilege of the whole system depends on this module where the both "Read and Write privileges' are given to the authorised doctors where a Configured Smart scanner is provided to scan/load the followed data into the E-prescription of the Respectives.

- BLOOD GROUP
- MEDICATION ALLERGIES
- CONSULTANCY AND PRESCRIPTION

Doctor is able to approve and reject appointment booked by the patient.

3. CHEMIST: The privileges to this system that "Read only privileges" with E-prescription reader where the pharmacist can provide the medications or drugs as per the doctor's prescription. Where this registered pharmacist cannot modify the patient's data for his safety purpose.

4. ADMIN: The admin registers complete patient information. It captures and stores the medical history, treatment required, details of their previous visits, upcoming appointments if any, reports, and more.

- All of these data are stored in the database in the tabular column Where the data is verified in database through scanning the E-prescription through the Health Card Reader which was dedicated to the patient at the time of registration which helps eliminate the need to get these details on every visit.
- This enables the doctor to focus more on the treatment and improves the patient experience. Admin also tracks each and every activity of the registered chemist I.e., the individual is an authorised seller of medicine, the License of the respective pharmacy and monitor the swiping activities of the health card of the visited patient to prevent the patient from the health hazards.

- Basically, the ADMIN plays a vital role in this system and manages the whole management system of each and every module.

5. RECEPTIONIST: This module plays a vital role in the system I.e., the privileges given to the receptionist is that at the time patient's fresh registration the basic detail of the patient is filled by this module where few information that can be filled by the receptionist is listed below at the time of registration.

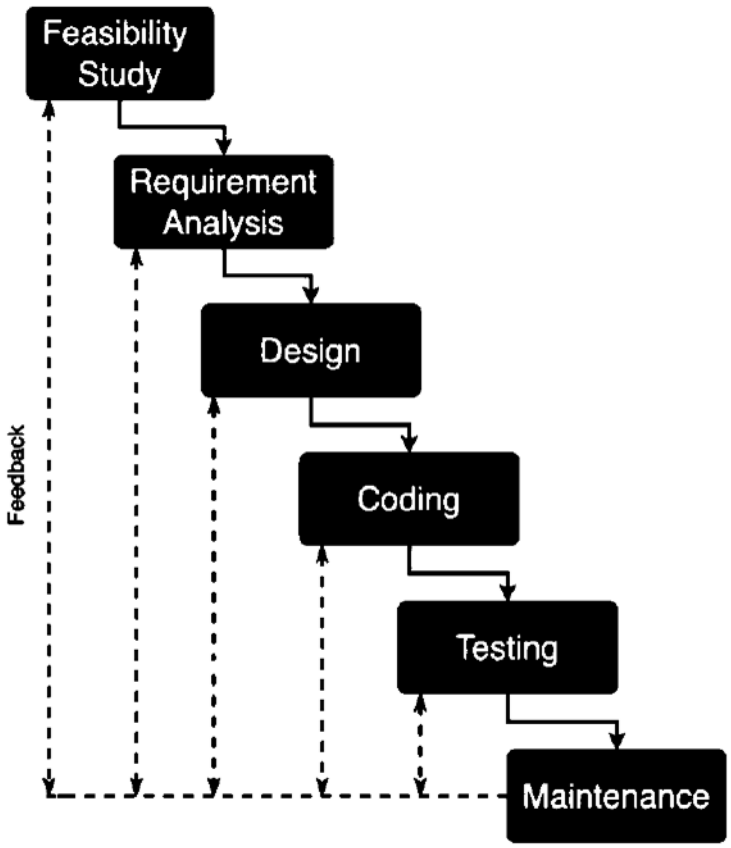
- **NAME**
- **GENDER**
- **DATE OF BIRTH**
- **AGE**
- **ADDRESS**
- **PHONE NUMBER**
- **EMERGENCY CONTACT NUMBER.**

Except the above detail the receptionist module the read only privileges is given to the rest of the precious data of the respective patient.

In case of if the patient needs the modification of his/her above data the receptionist is the authorised person to modify the data of respective patient as well as the patient needs to repeal his smart health card which can be done by this module.

Receptionist will also book an appointment for patient in order to help patient who are unable to do so.

2.2 Project Model



[Figure 1: Iterative Waterfall Model]

- A typical E-Prescription application involves tags which are attached to objects and readers which receive signals from tags to identify objects. Compared with traditional barcode systems, E-Prescription allows tags to be read outside the line of sight of the reader, and the distance between tag and reader can be several meters. Thus, when implementing an Smart Health Card System, we need to test it to ensure its reliability and quality. The testing process involves a series of activities to evaluate and determine whether the system meets its required results under controlled conditions. We need to ensure that results meet our requirements. The testing techniques mainly involve executing a program in order to find bugs. Such

testing can be very time-consuming or even impossible, since we may need to enumerate all possible test cases. Hence to evaluate our solution's effectiveness and efficiency, we adopt iterative model of SDLC in our experiments. Our experimental results show that although only a few representative test cases are adopted in the test, we still achieve relative high bug detection rate.

Advantages

- Each successive version performing more useful work than previous Version
- The core modules get tested thoroughly, thereby reducing change of error in final product.
- The model is more flexible and less costly to change the scope and requirement.
- User gets a change to experiment with partially developed software.
- This model helps finishing exact user requirements.
- Feedback providing at each increment is useful for determining the better final product

2.3 Schedule Representation

Generalized project scheduling tools and technique can be applied with little modification to software projects. Program evolution and review techniques (PERT) and critical path method (CPM) are two project scheduling method that can be applied to software development. Both techniques are driven by information already developed in earlier project planning activities:

- Estimate of effort.
- A decomposition of the product function.
- The selection of appropriate process model and task set.
- Decomposition of tasks.

[Table 1: Schedule Representation]

ACTIVITY	START DATE	FINISH DATE
Requirement Analysis		
System Analysis		
System Design		
System coding		
Testing and Integration		

2.4 Feasibility study

- **Technical Feasibility:** A study of resource availability that may affect the ability to achieve an acceptable system. This evaluation determines that work for the project be done with current equipment existing software technology & available resources. This is concerned with specifying equipment and software that will successfully satisfy the user requirement. We decided to develop the project &we went through an extensive study to determine the most suitable platform that suits the needs for the implementation of system as well as helps in development of the projects which includes the languages for the integration of hardware & software part of system with the data which are available for the implementation and easily available such as E-prescription and Smart Health card Reader also can be developed in both the front end and back end interfaces of the system which leads to high feasibility of End product/System in means of technology.

- **Economic Feasibility** as a part of this, the costs and benefits associated with the proposed system are compared and the project is economically

feasible. The cost for proposed E-Prescription system is operating budget cost and efforts involved in maintaining the database, health details, files and generation of various reports. The system also reduces the administrative and technical staff to do various jobs that single software can do. So, this system is economically feasible.

- **Legal Feasibility:** The due diligence process should ensure that the project is procured in accordance with current legal requirements, both in domestic and international terms, and that key aspects of the project have been analysed from a legal perspective. In order to assess the legal feasibility of the project i.e., Approval from the appropriate authorities. At the same time, right to privacy laws grant individuals a fundamental right to control the collection of, access to, and use of personal information about them that is held by governments and private bodies.

- **Operational Feasibility:** As for the implementation of this system all human resources are available to make the system operative once the system come into the operation. For the operation of this system both the end users and operators doesn't need any kind of training and insulation of the system thus can we operated by any users without any interrupt which make more feasible in means of operation Beyond improving patient safety, this technology can help hospitals save money by enabling employees to work more productively and efficiently. The use of E-Prescription offers many benefits to the healthcare industry related to patient safety, tracking, efficiencies in patient care. The results of this study showed that the system correctly identified medical staff, patient ID, and medication and blood sampling data in real time.

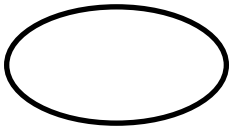
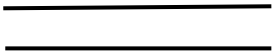
CHAPTER-3

DESIGN

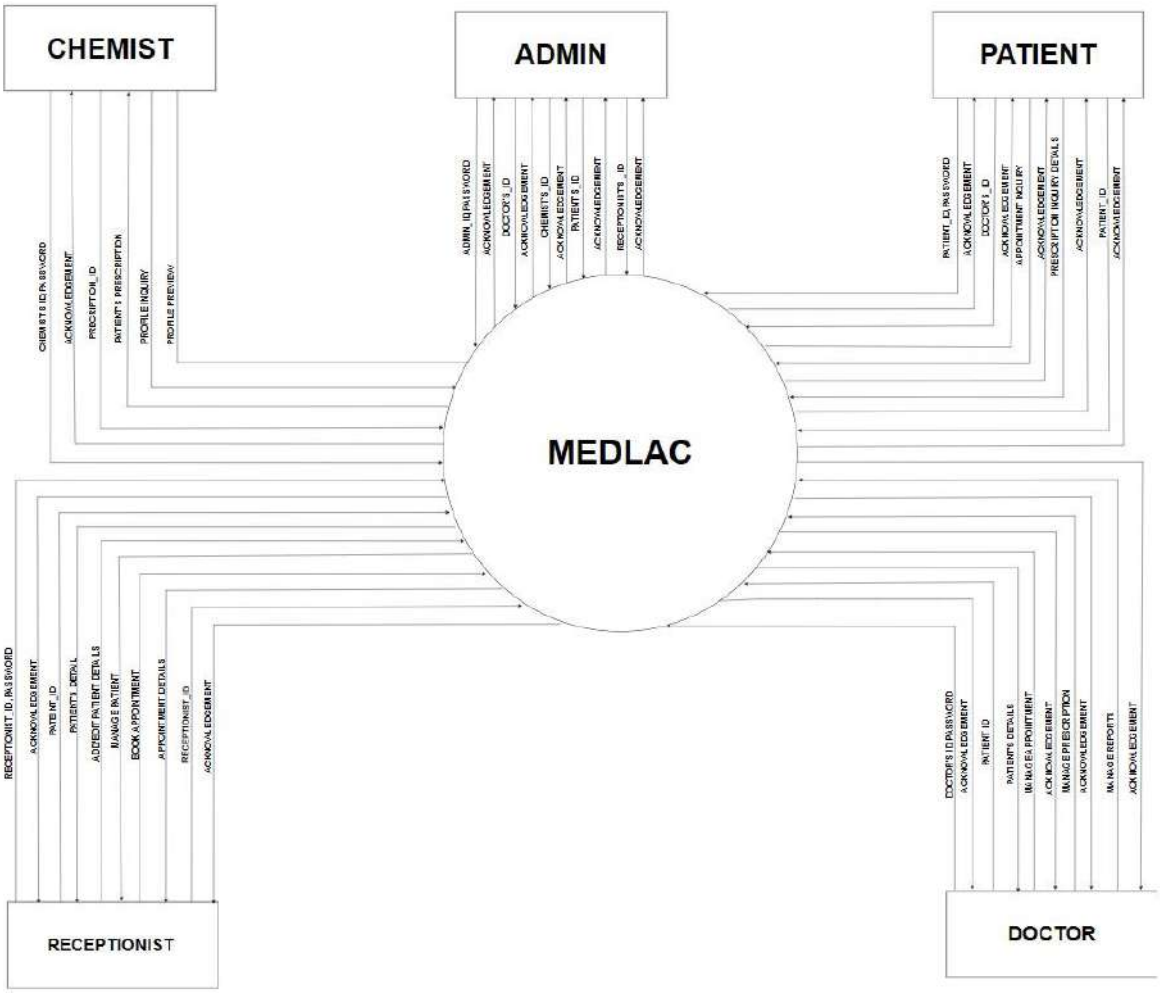
3.1 Data flow Diagram

- DFD (data flow diagram) is also known as bubble chart or data flow graph.
- DFD's are very useful in understanding the system and can be effectively used during analysis. It shows flow of data through a system visually.
- The DFD is a hierarchical graphical model of a system the different processing activities or functions that the system performs and the data interchange among these functions.
- It views a system as a function that transforms the inputs into desired output.

[Table 2: DFD Symbols]

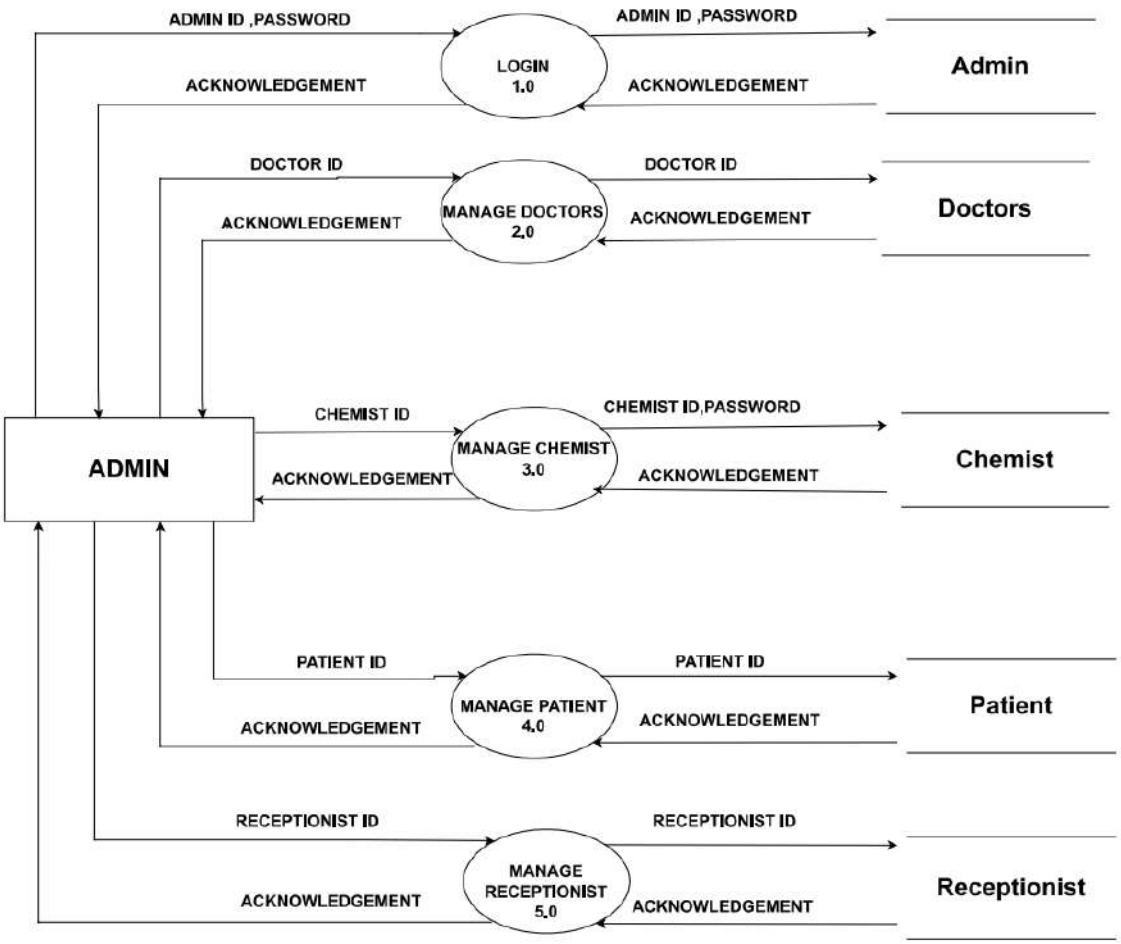
SYMBOLS	SYMBOLS NAME
	**External entity:** It is the origin or destination of data. Entities are external to the system.
	**Process:** performs some action on data, such as creates, modifies, stores, delete, etc. can be manual or supported by computer.
	**Output:** This is used to represent the output of the presently occurred process.
	**Data flow:** The flow of data into or out a process, database or entity.
	**Data store:** information that is kept and accessed. May be in paper file folder or a database.

Level 0



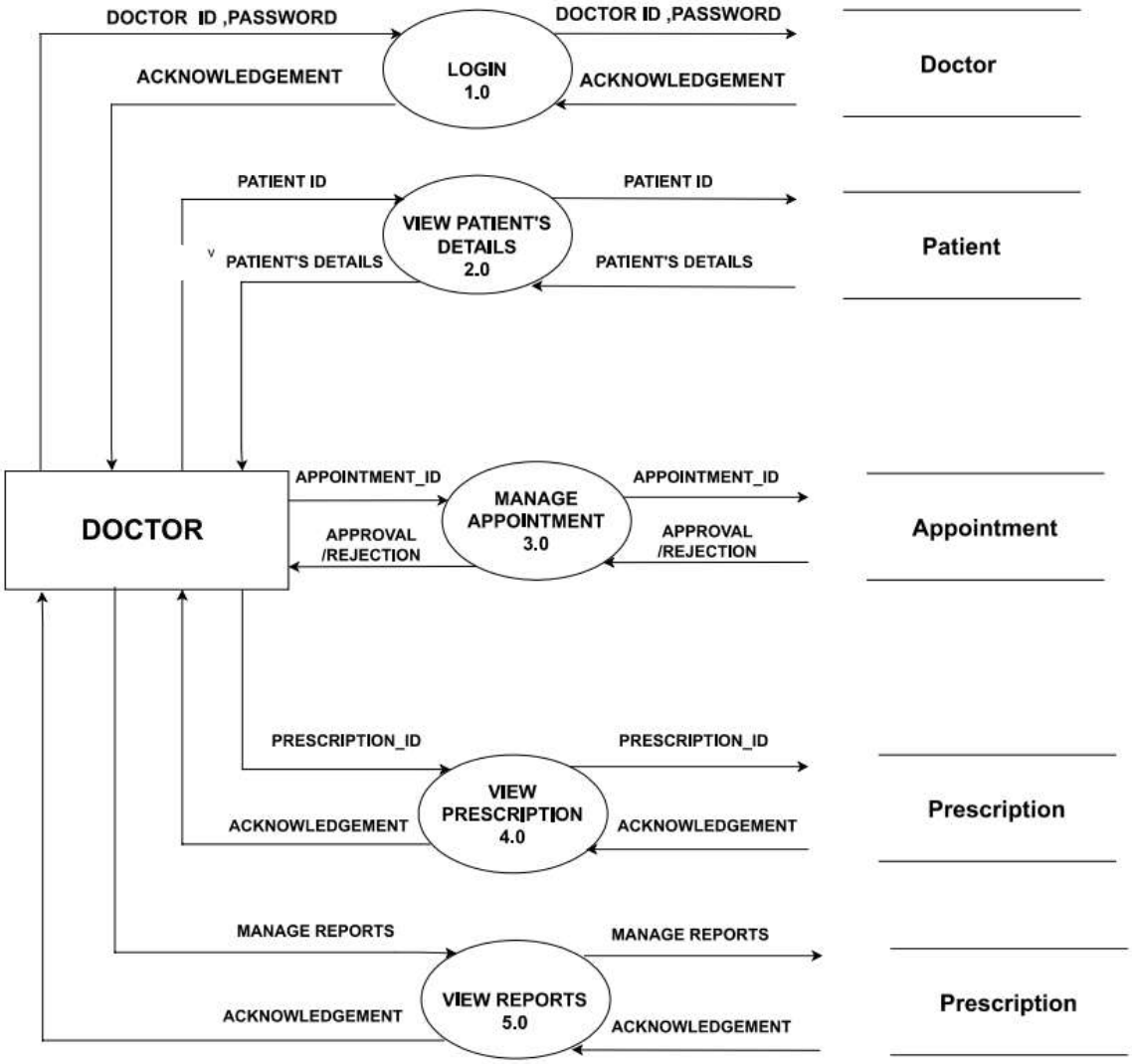
[Figure 2: DFD Level 0]

Level 1: Admin



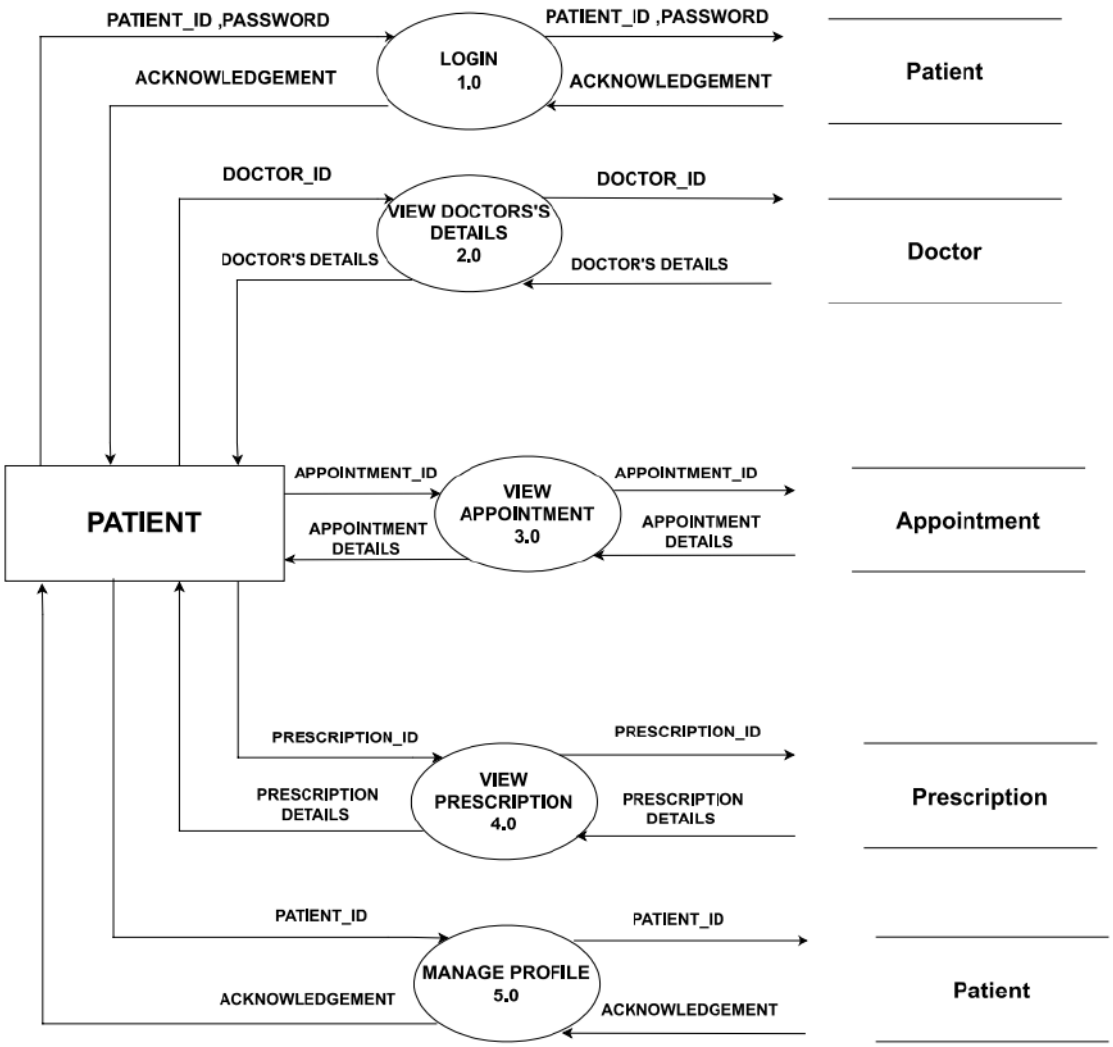
[Figure 3: DFD Level 1: Admin]

Level 1: Doctor



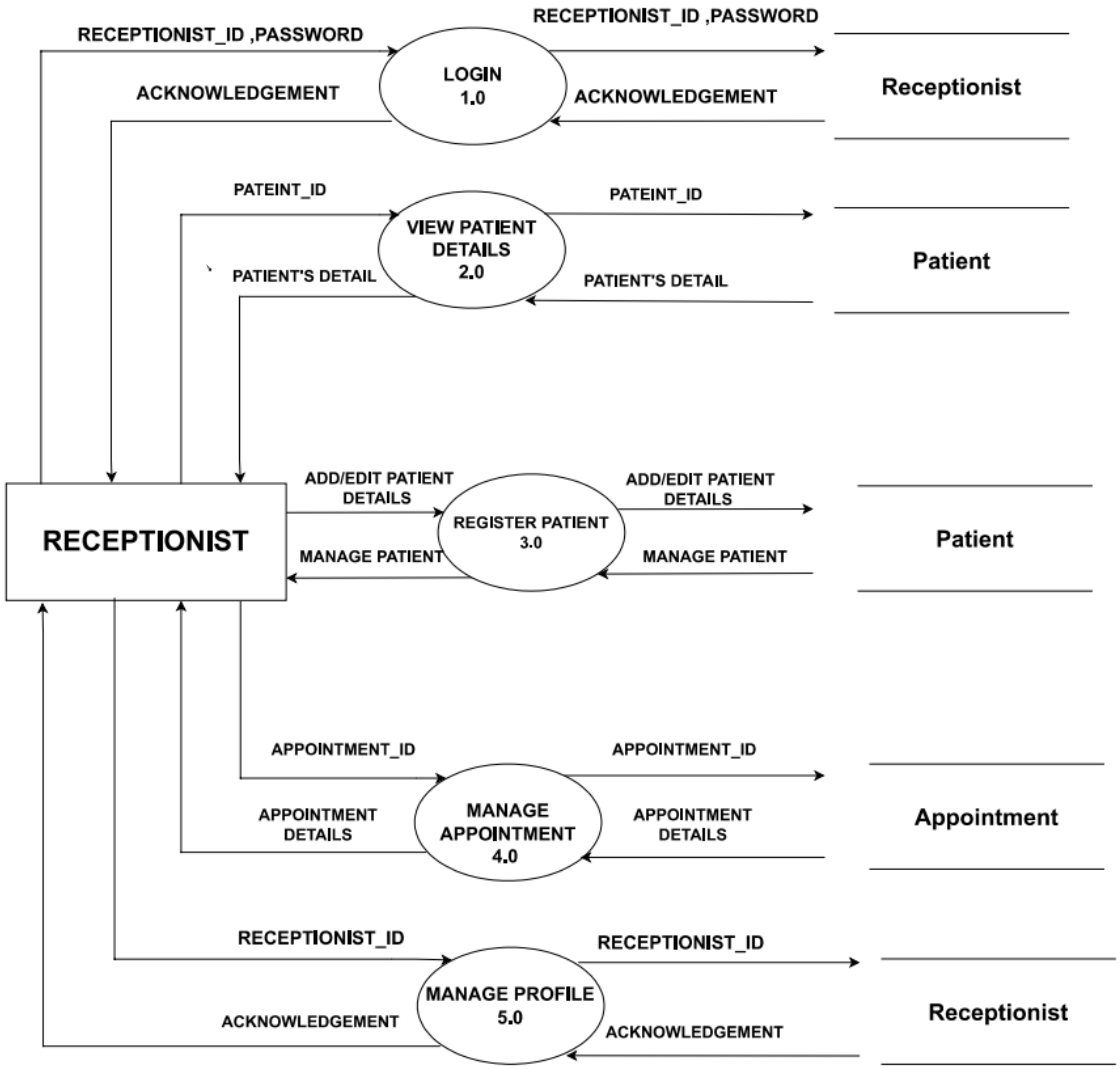
[Figure 4: DFD Level 1: Doctor]

Level 1: Patient



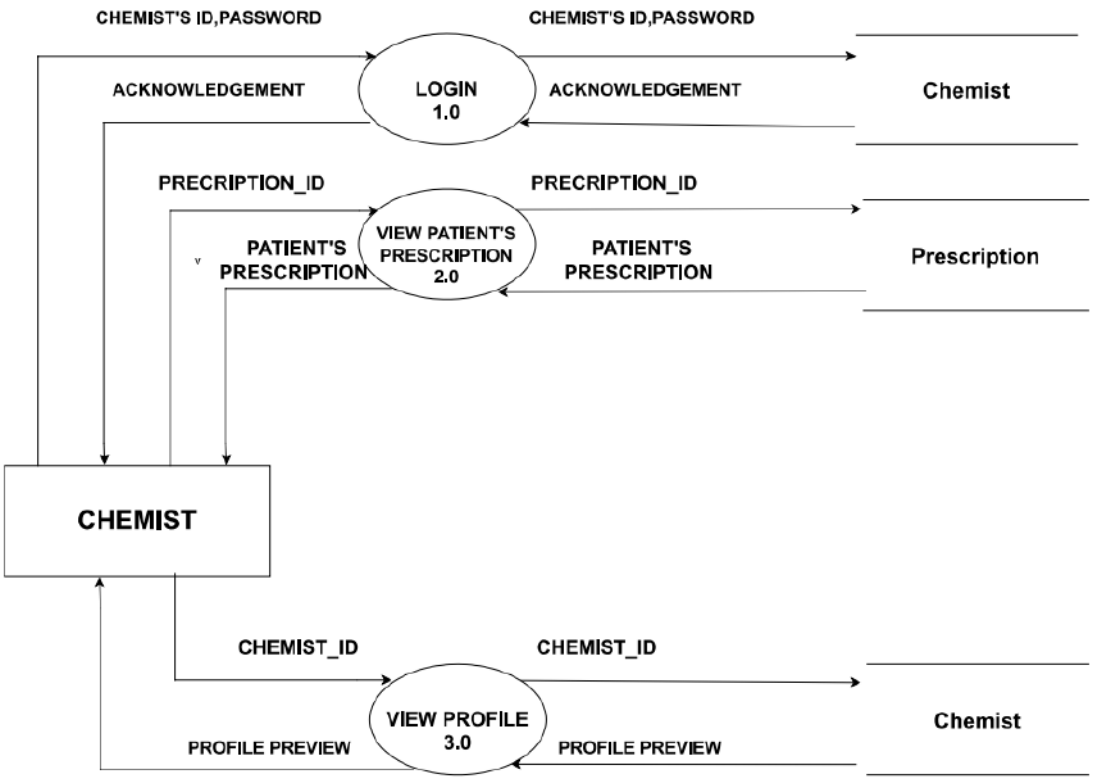
[Figure 5: DFD Level 1: Patient]

Level 1: Receptionist



[Figure 6: DFD Level 1: Receptionist]

Level 1: Chemist

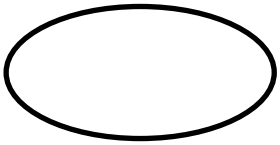
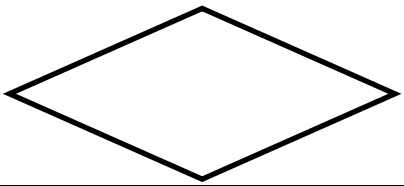


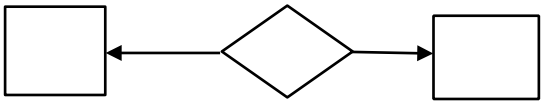
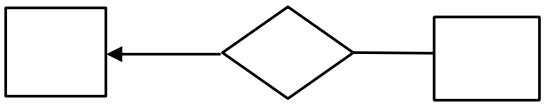
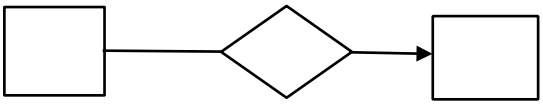
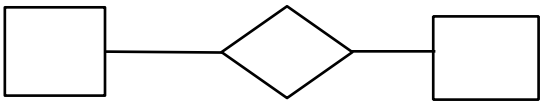
[Figure 7: DFD Level 1: Chemist]

3.2 ER-Diagram

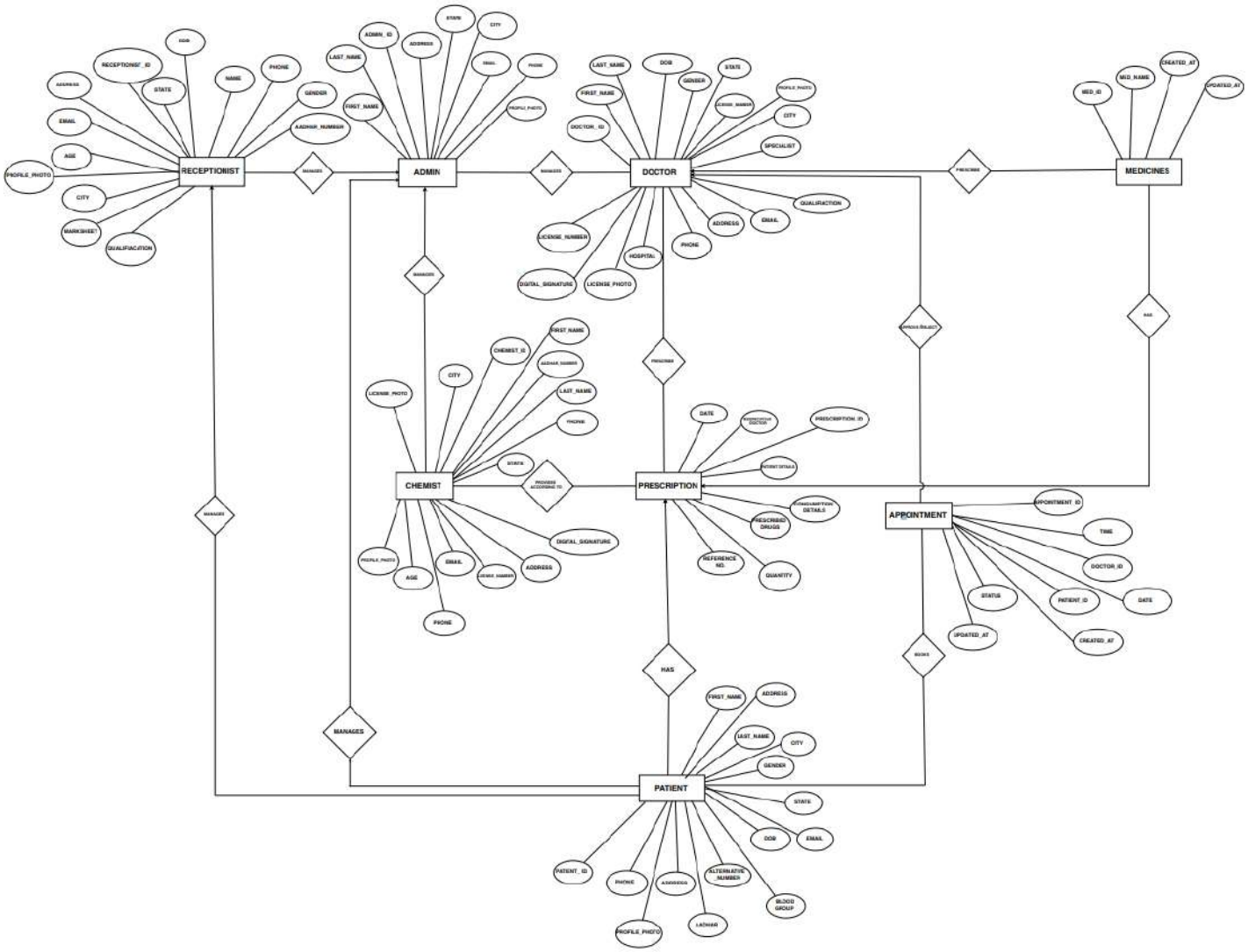
- An Entity Relationship (ER) Diagram is a type of flowchart that illustrates how “entities” such as people, objects or concepts relate to each other within a system. ER Diagrams are most often used to design or debug relational databases in the fields of software engineering, business information systems, education and research. Also known as ERDs or ER Models, they use a defined set of symbols such as rectangles, diamonds, ovals and connecting lines to depict the interconnectedness of entities, relationships and their attributes. They mirror grammatical structure, with entities as nouns and relationships as verbs.

[Table 3: ER-Diagram Symbols]

Symbols	Description
	**Entity:** Data object is real world entity or thing. It is represented by a rectangle shape. An entity is an object or concept about which you want to store information.
	**Attributes:** An attribute is property of characteristic of an entity. It is represented by oval shape.
	**Relationship:** Entity are connected each other via relations. Generally, relationships in binary because

	there are two entities are related to each other.
	**Cardinality (One to One):** An instance of entity A can relate to one instances of entity B.
	**Cardinality (One to Many):** An instance of entity A can relate to one or many instances of B but we can only relate one instance of A.
	**Cardinality (Many to One):** One or more instances of entity A can relate to one instances of B.
	**Cardinality (Many to Many):** One or more instances of entity A can relate to one more instance of entity B.

ER-Diagram:



[Figure 8: ER Diagram]

CHAPTER-4

SYSTEM MODELING

4.1 Database Design:

Table name: Admin

Description: This is used to store the data of the Admin

Primary key: admin_id

[Table 4: Admin]

SR NO.	Field	Data type(size)	Constraint	Description
1	admin_id	Int (08)	Primary key	Uniquely identified number
2	profile_photo	longblob	Not NULL	Specifies the profile photo of Admin
3	first_name	Char (50)	Not NULL	Specifies the first name of Admin
4	last_name	Char (10)	Not NULL	Specifies the last name of Admin
5	email	Varchar (100)	Not NULL	Specifies the email of the admin
6	phone_number	Int (10)	Not NULL	Specifies the contact number of Admin
7	state	Char (15)	Not NULL	Specifies the state of the admin.
8	city	Char (30)	Not NULL	Specifies the city of the admin.
9	address	Varchar (100)	Not NULL	Specifies the address of the admin.
10	password	Text	Not NULL	Specifies the password of the admin.
11	created_at	Timestamp	Default	Specifies the time of creation of the admin profile
12	updated_at	Timestamp	Default	Specifies the time of updating of the admin profile

Table name: Doctor

Description: This is used to store the data of the Doctors

Primary key: doctor_id

[Table 5: Doctor]

SR.NO	Field	Data type(size)	Constraint	Description
1	doctor_id	Int (10)	Primary key	Uniquely identified number
2	profile_ photo	Longbob	Not NULL	Contains the profile photo of respective doctor
3	first_name	Char (50)	Not NULL	Specifies the first name of doctor
4	last _name	Char (50)	Not NULL	Specifies the last name of doctor
5	gender	Char (6)	Not NULL	Specifies the gender of doctor
6	dob	Date	Not NULL	Specifies the date of birth of respective Doctor
7	phone	Int (10)	Not NULL	Specifies the contact number of doctor
8	state	Char (15)	Not NULL	Specifies State of doctor
9	city	Char (30)	Not NULL	Specifies city of doctor
10	address	Varchar (250)	Not NULL	Specifies address of doctor
11	hospital	Varchar (150)	Not NULL	Defines the working Clinic/Hospital of respective Doctor
12	qualification	Varchar (100)	Not NULL	Defines the qualification of respective doctor
13	specialist	Char (20)	Not NULL	Defines the specialization of respective field
14	license_ number	Varchar (10)	Not NULL	Specifies the license number of the respective Doctor
15	license_ Photo	Longbob	Not NULL	Specifies the license photo of the respective Doctor
16	aadhar_ number	Int (12)	Not NULL	Specifies the Aadhaar number of the respective Doctor
17	digital_ signature	Longbob	Not NULL	Specifies the digital signature of the respective Doctor
18	email	Varchar (100)	Not NULL	Specifies the email address of the respective Doctor
19	password	Text	Not NULL	Specifies the password of the respective Doctor in encrypted form
20	created_at	Timestamp	Default	Specifies the date of creation of the respective Doctor

21	updated_at	Timestamp	Default	Specifies the time of updationn of the admin profile

Table name: Receptionist

Description: This is used to store the data of the Receptionist

Primary key: receptionist_id

[Table 6: Receptionist]

SR.NO	Field	Data type(size)	Constraint	Description
1	receptionist_id	Int (10)	Primary key	Uniquely identified number
2	profile_ photo	Longbob	Not NULL	Contains the profile photo of respective receptionist
3	first_name	Char (50)	Not NULL	Specifies the first name of Receptionist
4	last _name	Char (50)	Not NULL	Specifies the last name of Receptionist
5	gender	Char (6)	Not NULL	Specifies the gender of Receptionist
6	dob	Date	Not NULL	Specifies the date of birth of Receptionist
7	phone	Int (10)	Not NULL	Specifies the contact number of Receptionist
8	state	Char (15)	Not NULL	Specifies the state of Receptionist
9	city	Char (30)	Not NULL	Specifies city of Receptionist
10	address	varchar (250)	Not NULL	Specifies address of Receptionist
11	aadhar_ number	Int (12)	Not NULL	Specifies the Aadhaar number of the Receptionist
12	email	Varchar (100)	Not NULL	Specifies the email address of Receptionist
13	qualification	Varchar (100)	Not NULL	Defines the qualification of Receptionist
14	Marksheet_id	Int(08)	Foreign key	Describes the marksheet of Receptionist
15	password	Text	Not NULL	Specifies the password of the respective Receptionist r in encrypted form
16	created_at	Timestamp	Default	Specifies the date of creation of the respective Receptionist
17	updated_at	Timestamp	Default	Specifies the date of updatation of the respective Receptionist

Table name: Prescription

Description: this is used to store the data of the Prescription

Primary key: prescription_id

Foreign key: patient_id, doctor_id, prescribed_drug_id

[Table 7: Prescription]

SR.NO	Field	Data type(size)	Constraint	Description
1	prescription_id	Int (10)	Primary key	Uniquely identified number
2	date	date	Not NULL	Specifies the date of prescription is prescribed
3	reference_number	Int (10)	Not null	Specifies the file number of the patient
4	quantity	Int (10)	Not NULL	Specifies the quantity of medicine prescribed
5	doctor_id	Int (10)	Foreign key	Specifies the id of doctor in prescriptions
6	patient_ id	Int (10)	Foreign key	Specifies the id of patient
7	consumption _details	Char (10)	Not NULL	Specifies the time of medicine intake
8	prescribed drug_id	Text	Foreign key	Specifies the medicine prescribed in prescription
9	created_at	Timestamp	Default	Specifies the creation date of the prescription
10	updated_at	Timestamp	Default	Specifies the updatation date of the prescription

Table name: Patient

Description: This is used to store the data of the Patient

Primary key: patient_id

[Table 8: Patient]

SR.NO	Field	Data type(size)	Constraint	Description
1	patient_id	Int (10)	Primary key	Uniquely identified number
2	profile_ photo	Longbob	Not NULL	Contains the profile photo of respective patient
3	first_name	Char (50)	Not NULL	Specifies the first name of patient
4	last _name	Char (50)	Not NULL	Specifies the last name of patient
5	gender	Char (6)	Not NULL	Specifies the gender of patient
6	blood_group	Varchar (5)	Not NULL	Specifies the Blood group of Respective patient
7	dob	Date	Not NULL	Specifies the date of birth of patient
8	phone	Int (10)	Not NULL	Specifies the contact number of patient
9	state	Char (15)	Not NULL	Specifies the state of patient
10	city	Char (30)	Not NULL	Specifies the city of patient
11	address	Varchar (250)	Not NULL	Specifies the address of patient
12	aadhar_number	Int (12)	Not NULL	Specifies the Aadhaar number of the patient
13	email	Varchar (100)	Not NULL	Specifies the email address of patient
14	created_at	Timestamp	Default	Specifies the date of creation of the respective patient
15	updated_at	Timestamp	Default	Specifies the date of updatation of the respective patient

Table name: Chemist

Description: This is used to store the data of the chemist

Primary key: chemist_id

[Table 9: Chemist]

SR.NO	Field	Data type(size)	Constraint	Description
1	chemist_id	Int (10)	Primary key	Uniquely identified number
2	profile_ photo	Longbob	Not NULL	Contains the profile photo of respective chemist
3	first_name	Char (50)	Not NULL	Specifies the first name chemist
4	last _name	Char (50)	Not NULL	Specifies the last name of chemist
5	age	Char (6)	Not NULL	Specifies the age of chemist
7	phone	Int (10)	Not NULL	Specifies the contact number of chemist
8	state	Char (15)	Not NULL	Specifies address of chemist
9	city	Char (30)	Not NULL	Specifies city of chemist
10	address	Varchar(250)	Not NULL	Specifies the address of chemist
11	license_ number	Varchar (10)	Not NULL	Specifies the license number of the respective chemist
12	license_ Photo	Longbob	Not NULL	Specifies the license photo of the respective chemist
13	aadhar_ number	Int (12)	Not NULL	Specifies the Aadhaar number of the chemist
14	digital_ signature	Longbob	Not NULL	Specifies the digital signature of the respective chemist
15	email	Varchar (100)	Not NULL	Specifies the email address of the respective chemist
16	password	Text	Not NULL	Specifies the password of the respective chemist in encrypted form
17	created_at	Timestamp	Default	Specifies the date of creation of the respective chemist
18	updated_at	Timestamp	Default	Specifies the date of updatation of the respective chemist

Table name: Aadhar

Description: This is used to store the data of the Aadhaar card details

Primary key: aadhar_id

[Table 10: Aadhar]

SR NO.	Field	Data type(size)	Constraint	Description
1	aadhar_id	Int (10)	Primary key	Uniquely identified number
2	first_name	Char (50)	Not NULL	Specifies the first name of license holder
3	last _name	Char (50)	Not NULL	Specifies the last name of license holder
4	aadhar_number	Int (12)	Not NULL	Specifies the aadhar number of license holder
5	created_at	Timestamp	Default	Specifies the date of creation of the license holder
6	updated_at	Timestamp	Default	Specifies the date of updatation of the respective license holder

Table name: License

Description: This is used to store the data of the license

Primary key: license_id

[Table 11: license]

SR.NO	Field	Data type(size)	Constraint	Description
1	license_id	Int (10)	Primary key	Uniquely identified Int
2	License_number	Varchar (8)	Not NULL	Specifies the number of license number
3	created_at	Timestamp	Default	Specifies the date of creation of marksheet holder
4	updated_at	Timestamp	Default	Specifies the date of updatation of specific marksheet

Table name: Medicine

Description: This is used to store the data of the medicines

Primary key: medicine_id

[Table 12: Medicine]

SR.NO	Field	Data type(size)	Constraint	Description
1	medicine_id	Int (10)	Primary key	Uniquely identified number
2	medicine_name	Varchar (200)	Not NULL	Specifies the name of medicine
3	created_at	Timestamp	Default	Specifies the date of creation of the medicine
4	updated_at	Timestamp	Default	Specifies the date of updatation of specific medicine

Table name: Marksheets

Description: This is used to store the data of the marksheets

Primary key: marksheet_id

[Table 13: Marksheet]

SR.NO	Field	Data type(size)	Constraint	Description
1	marksheet_id	Int (10)	Primary key	Uniquely identified Int
2	marksheet_number	Int (12)	Not NULL	Specifies the number of marksheet holder
3	created_at	Timestamp	Default	Specifies the date of creation of marksheet holder
4	updated_at	Timestamp	Default	Specifies the date of updatation of specific marksheet

Table name: Appointment

Description: This is used to store the data of the appointments of patients

Primary key: appointment_id

Foreign key: patient_id, doctor_id

[Table 14: Appointment]

SR.NO	Field	Data type(size)	Constraint	Description
1	appointment_id	Int (10)	Primary key	Uniquely identified number
2	date	Date	Not NULL	Contains the date of appointment
3	time	Time	Not NULL	Contains the time slot of appointment
4	patient_id	Int (10)	Foreign Key	Specifies the patient id of respective who has booked slot
5	doctor_id	Int (10)	Foreign Key	Specifies the doctor id of respective for whom the appointment is booked
6	status	Boolean	Not NULL	Specifies the status of appointment i.e., Accept & Rejection
7	created_at	Timestamp	Default	Specifies the date of creation of appointment
8	updated_at	Timestamp	Default	Specifies the date of updatation of specific appointment

CHAPTER – 5

TECHNICAL SPECIFICATION

5.1 Hardware Specification

5.1.1 RAM: 4 GB

5.1.2 Hard Drive Storage: 10 GB

5.1.3 Other Hardware Requirements: Smart Health Card, Barcode Reader, ARDUINO UNO

5.2 Platform

5.2.1 Supported Operating System: Linux, MAC, IOS, Windows(above Windows XP), Android

5.2.2 Programming Server: Apache 2.4.54.2, Oracle 11g

5.3 Framework

5.3.1 Mark-up Language: HTML 5, CSS3, JS

5.3.2 Programming Language: PHP 8.2.6

5.3.3 Scripting Language: Java Script ECMAScript 2021

5.4 Technical Specification

5.4.1 Front-End: PHP 8.2.6

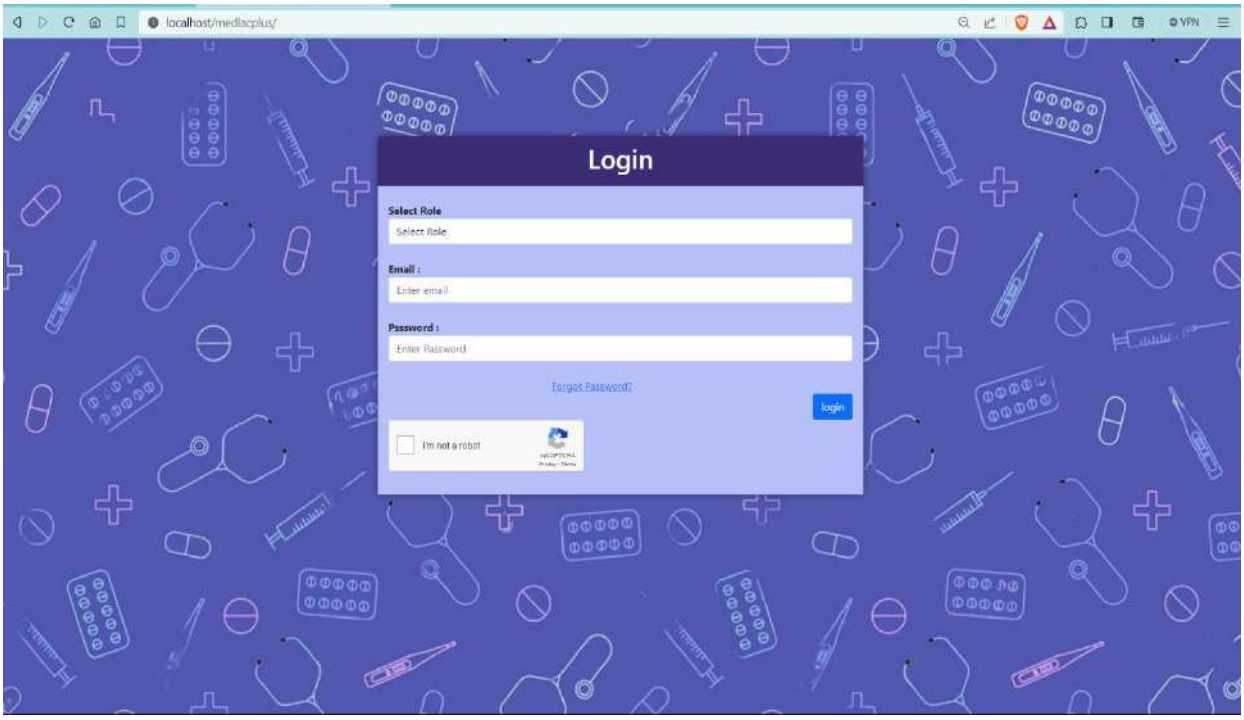
5.4.2 Back-End: MySQL version 8.0.34

5.4.3 IDE: Visual studio code 1.83

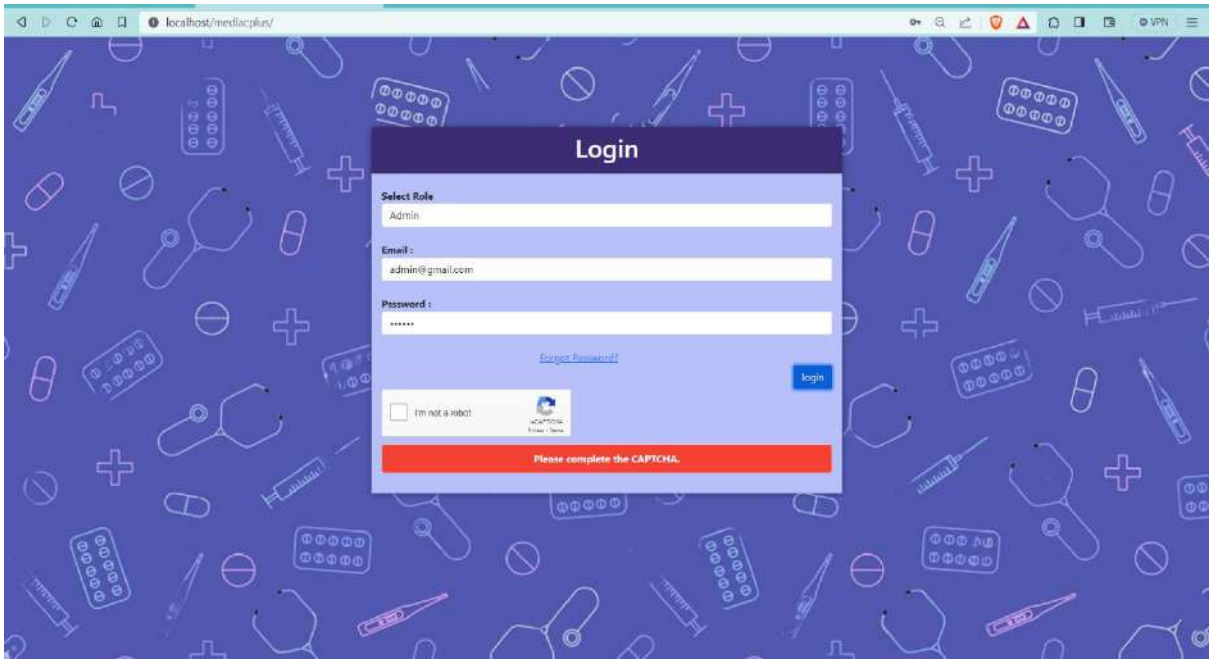
5.4.4 UML Tools: Draw.io

5.4.5 SRS Tools: Microsoft Word 2023

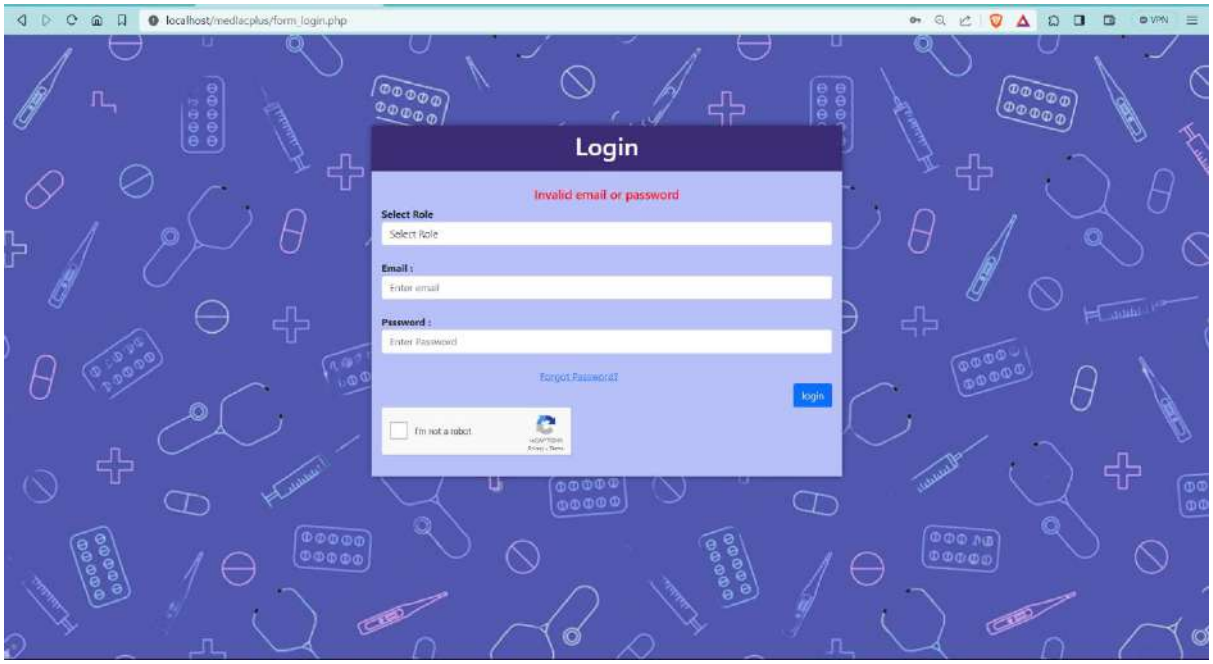
5.5 DESIGN LAYOUT



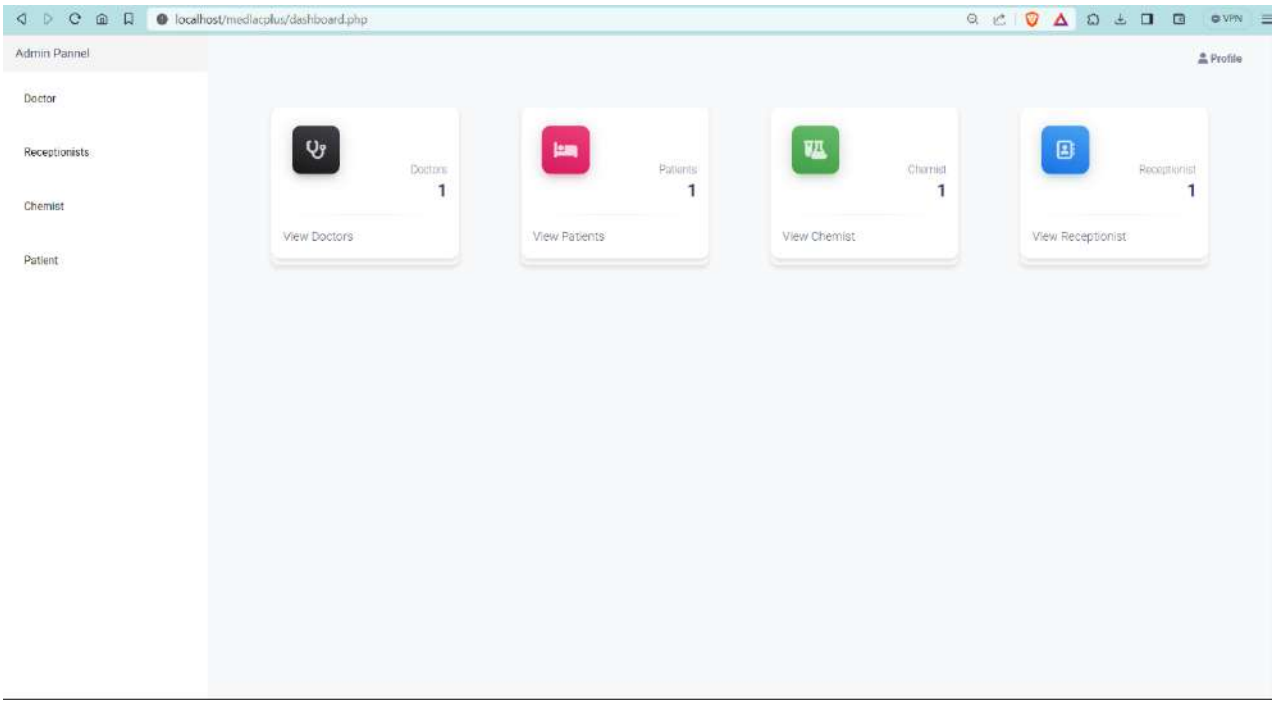
[Figure 9 : Login Page Layout]



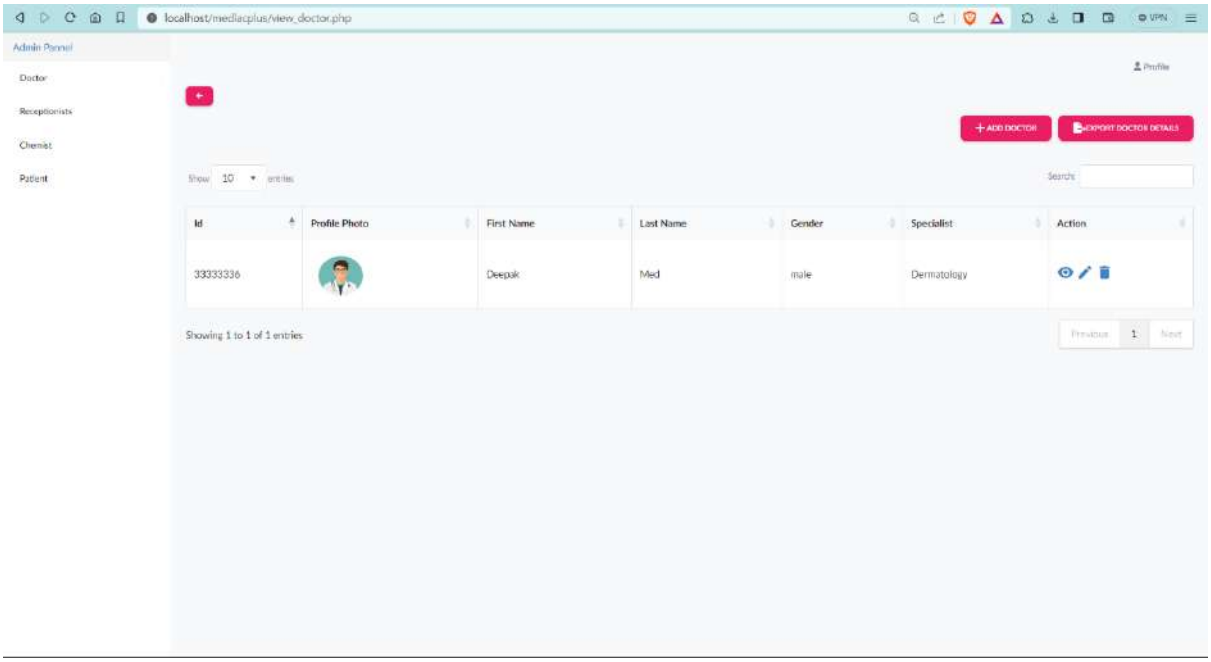
[Figure : Login Page With Captche Validation]



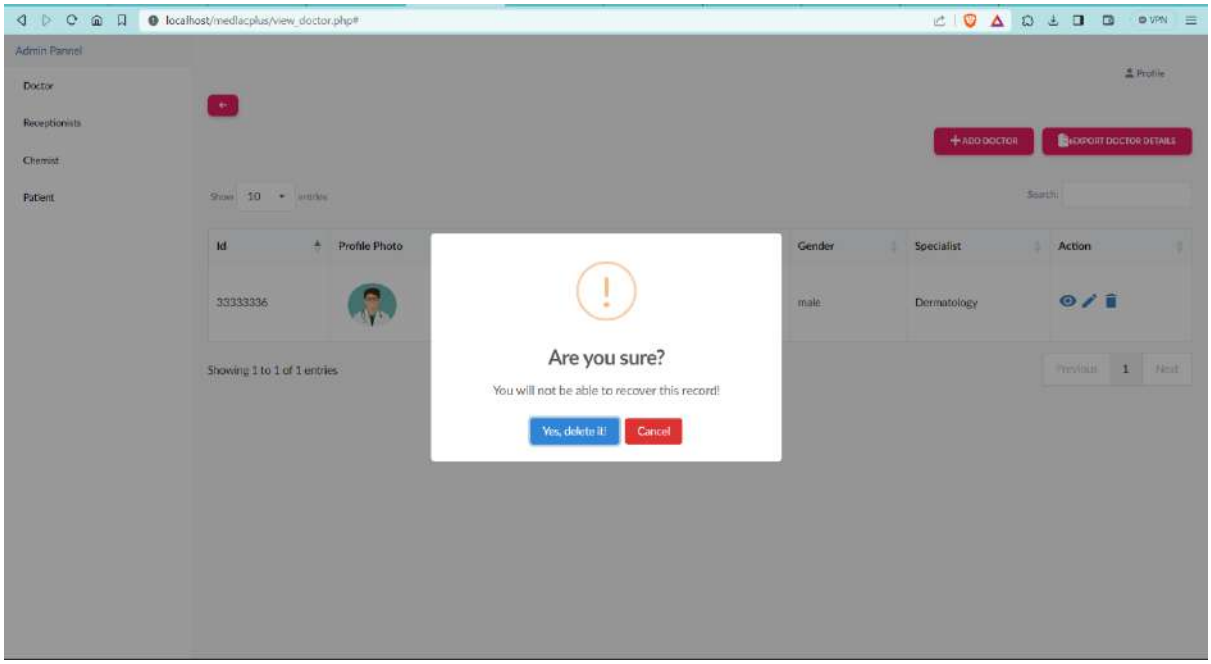
[Figure : Login Page With Invalid Email Or Password]



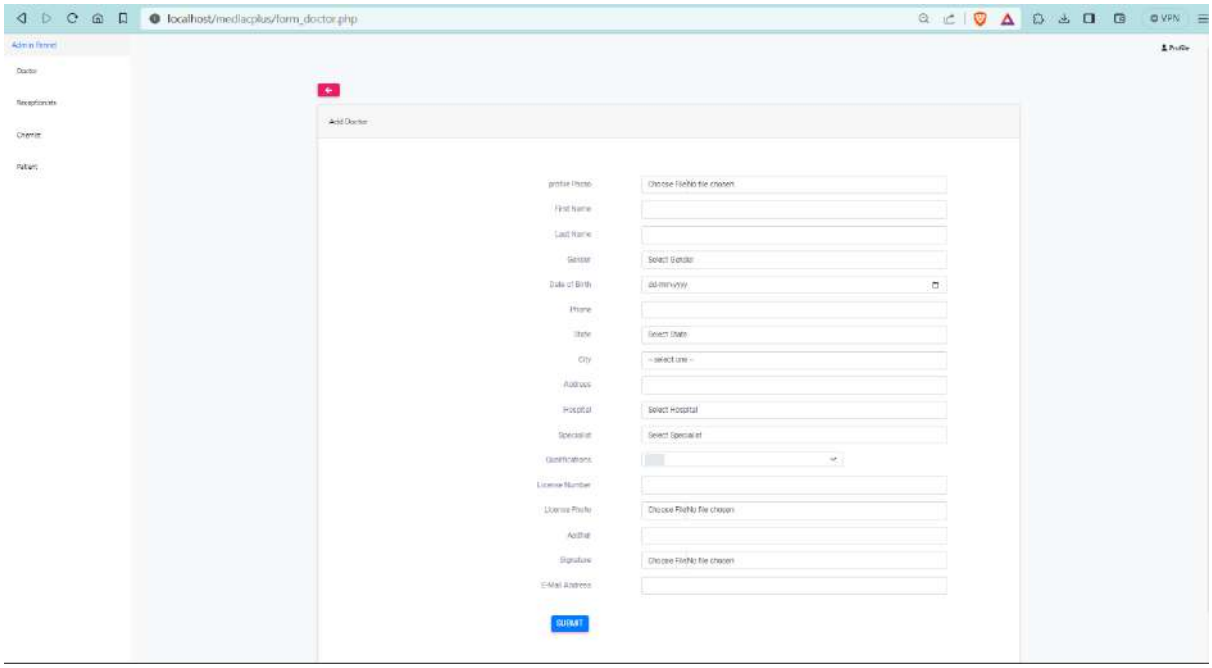
[Figure : Dashboard]



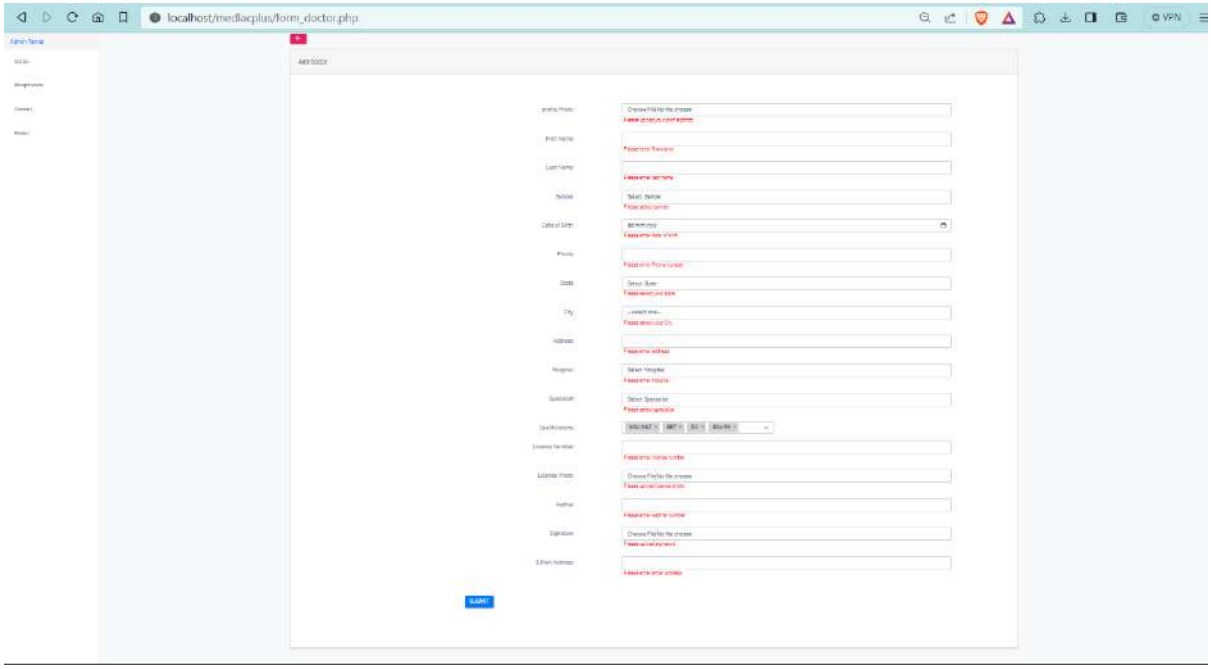
[Figure : View Doctor]



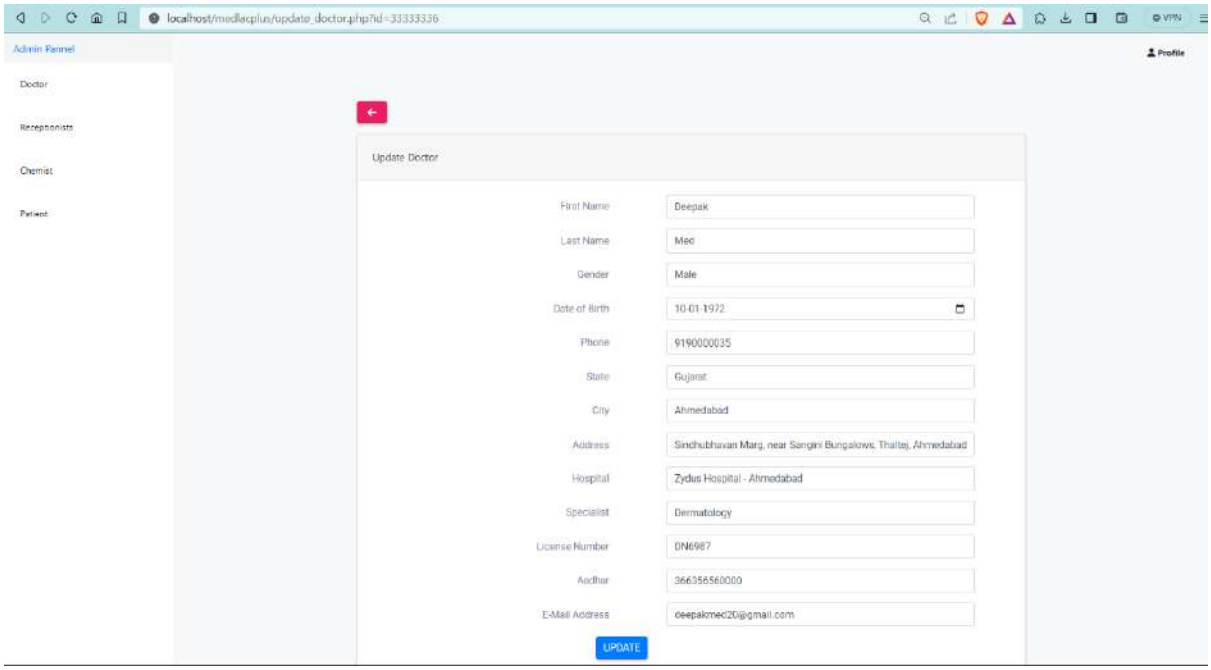
[Figure :Delete Conformation]



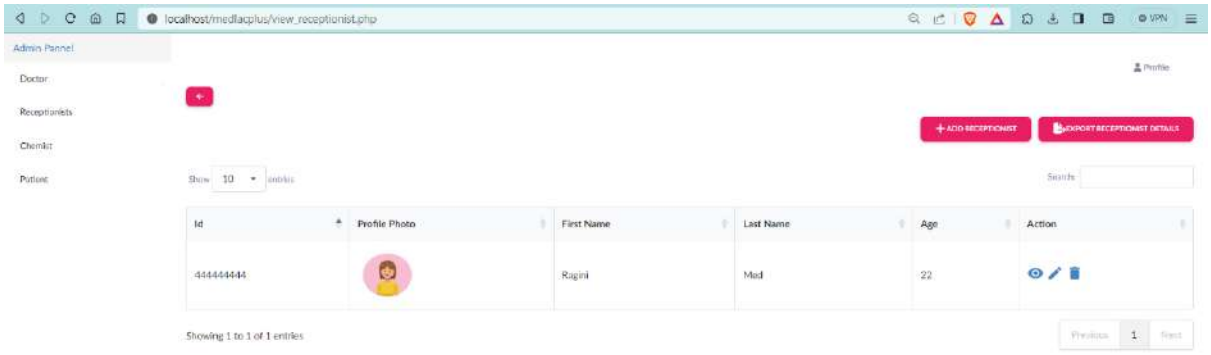
[Figure : Add Doctor]



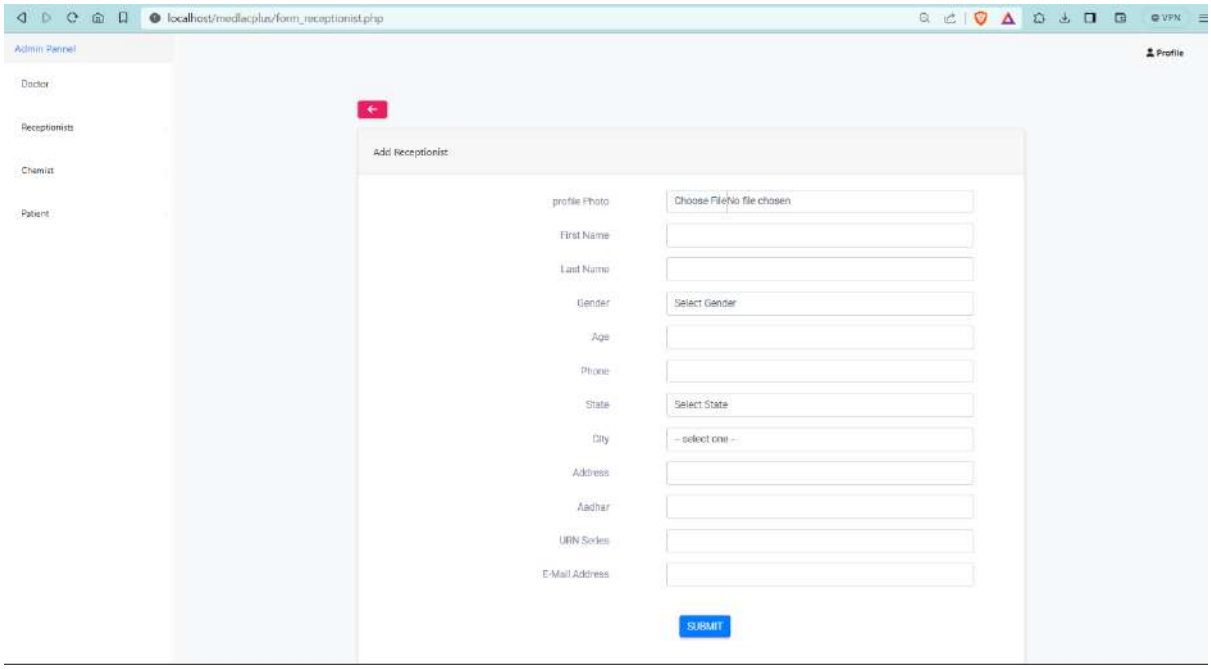
[Figure : doctor validation]



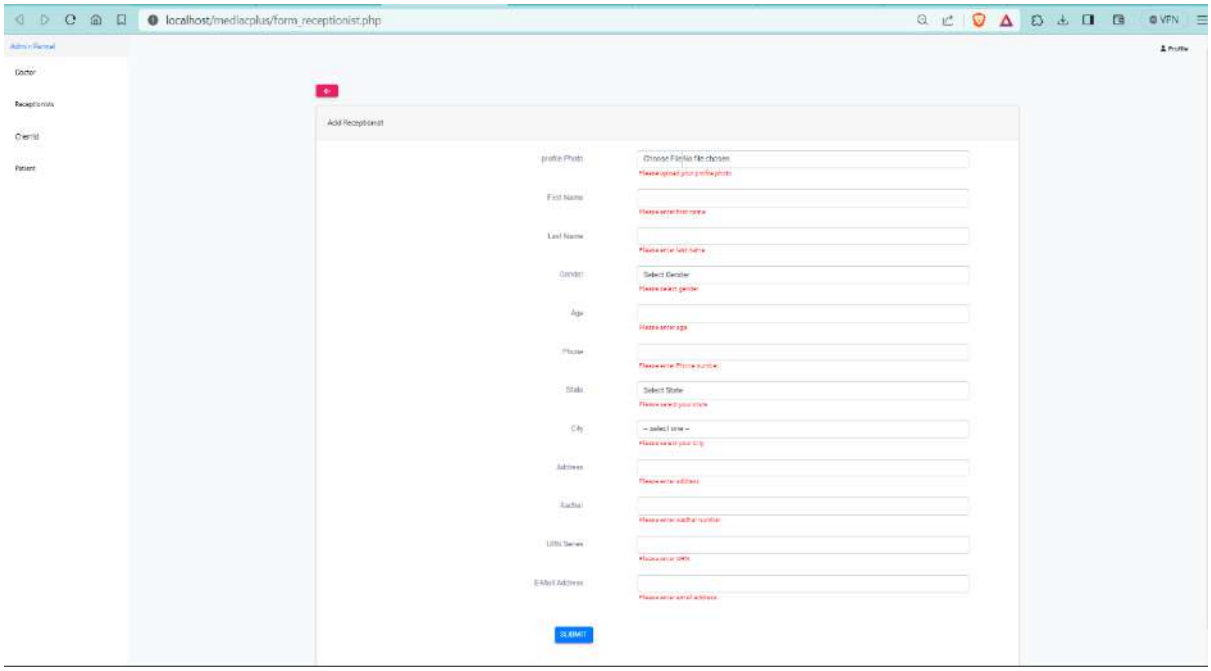
[Figure :Update Doctor]



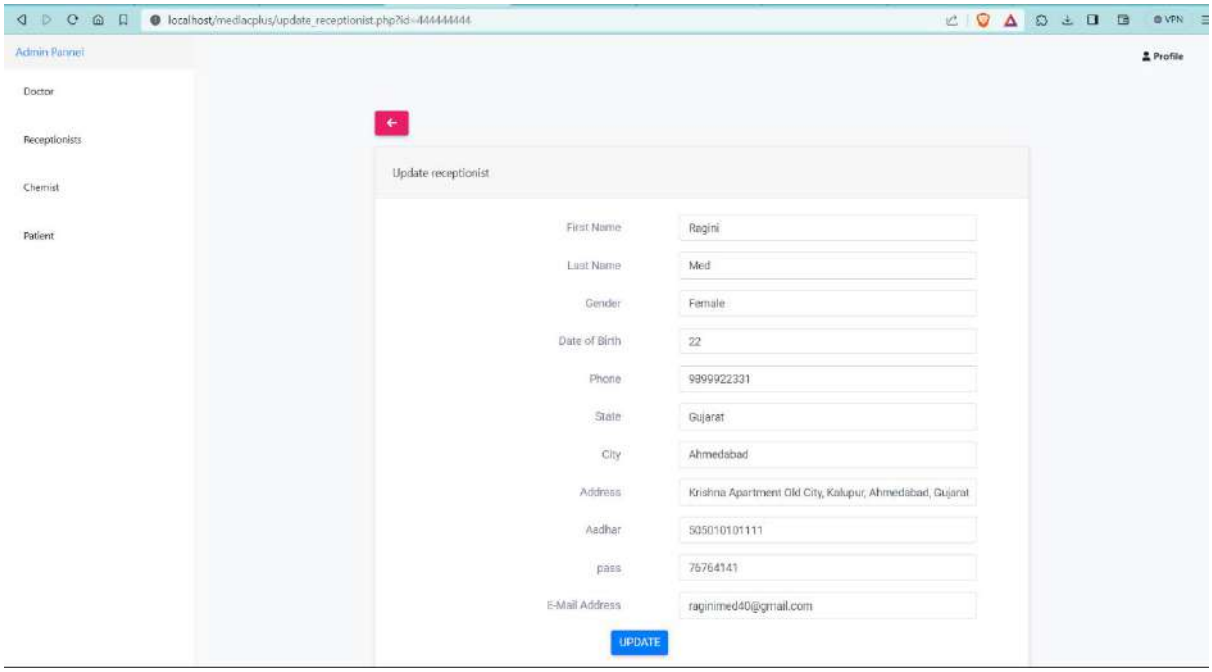
[Figure: View Receptionist]



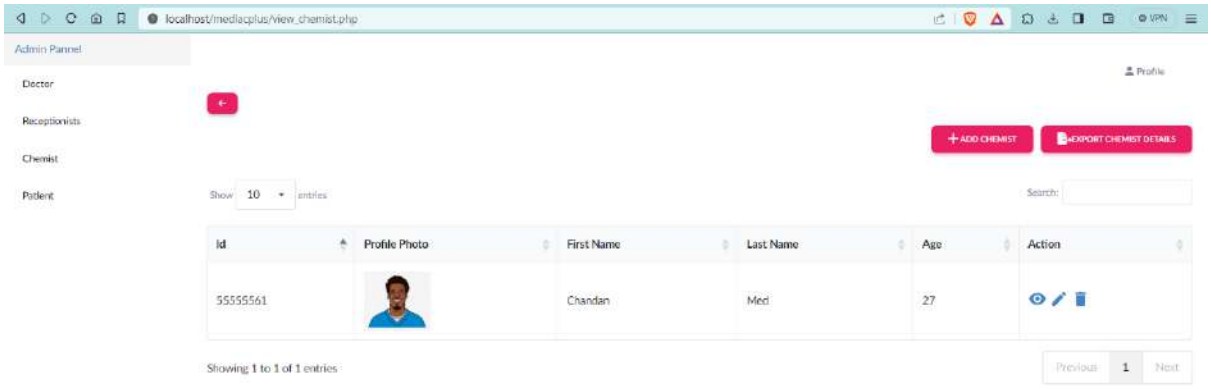
[Figure : Add Receptionist]



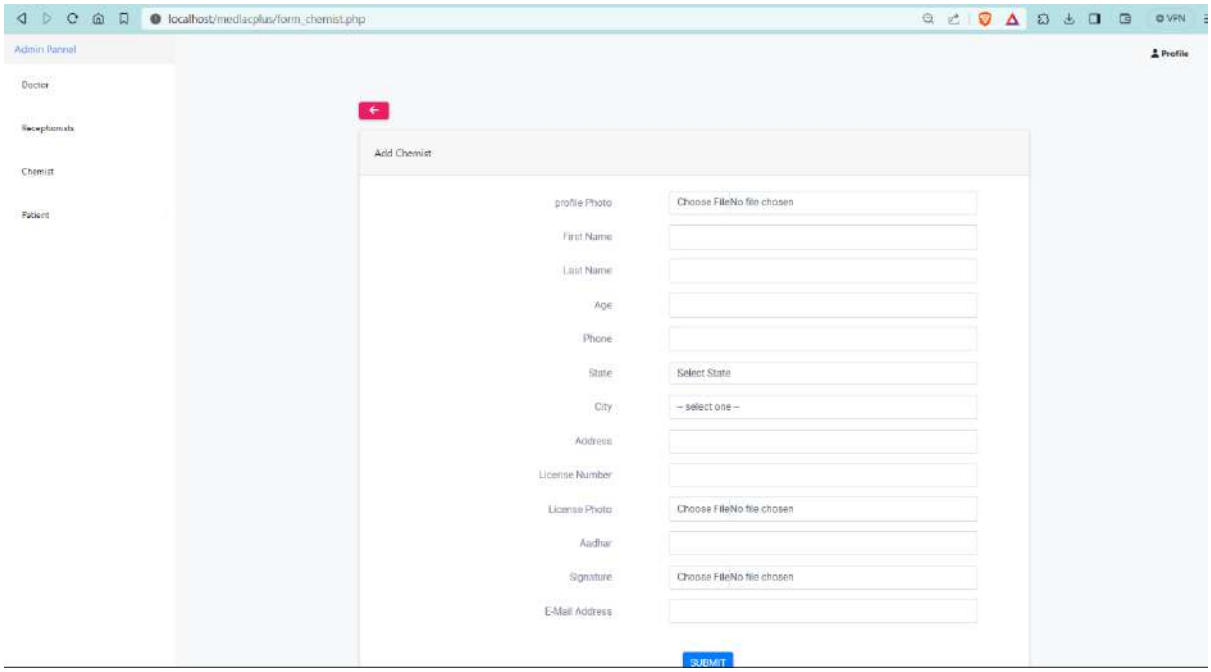
[Figure :Receptionist Validation]



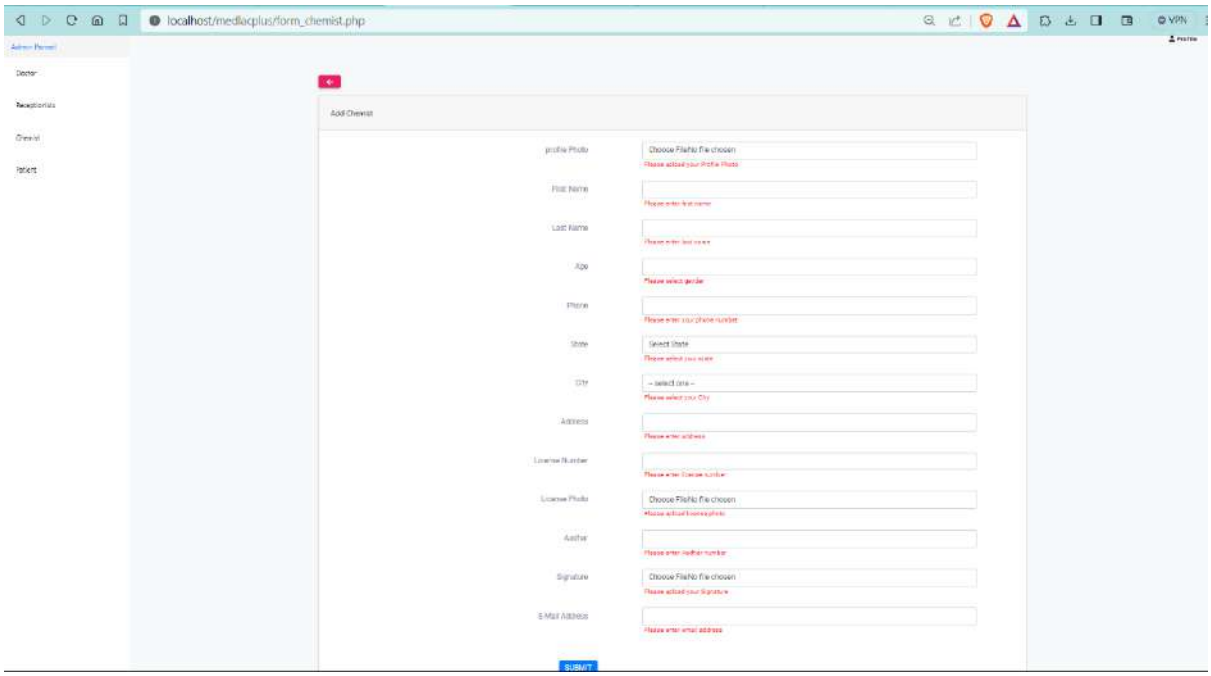
[Figure : Update Receptionist]



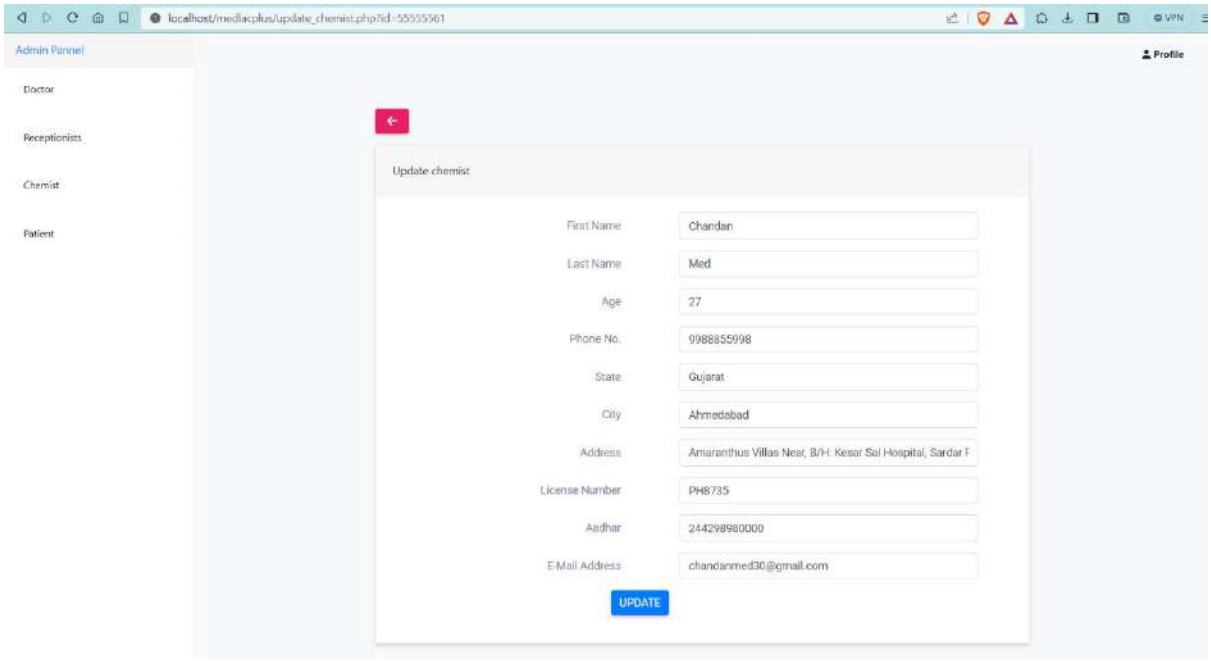
[Figure :View Chemist]



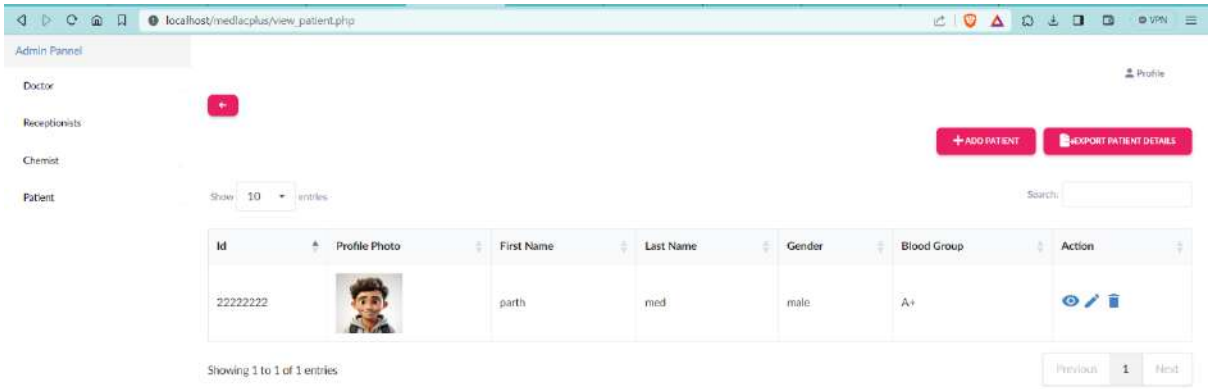
[Figure :Add Chemist]



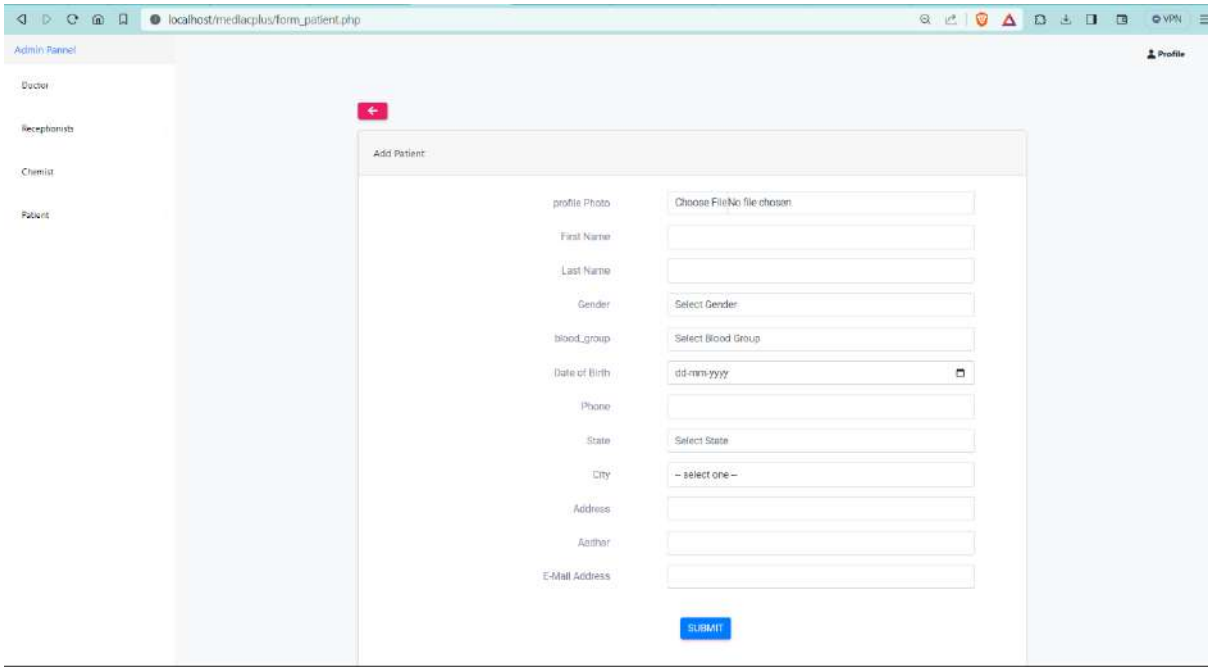
[Figure :Chemist Validation]



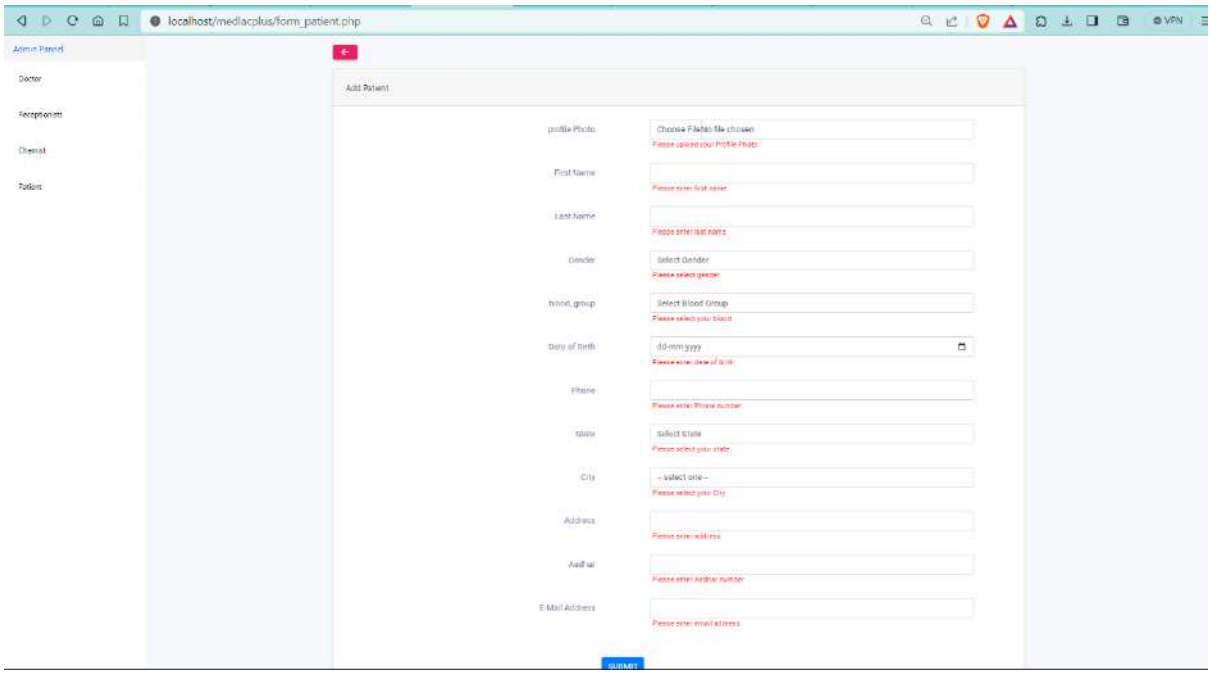
[Figure :Update Chemist]



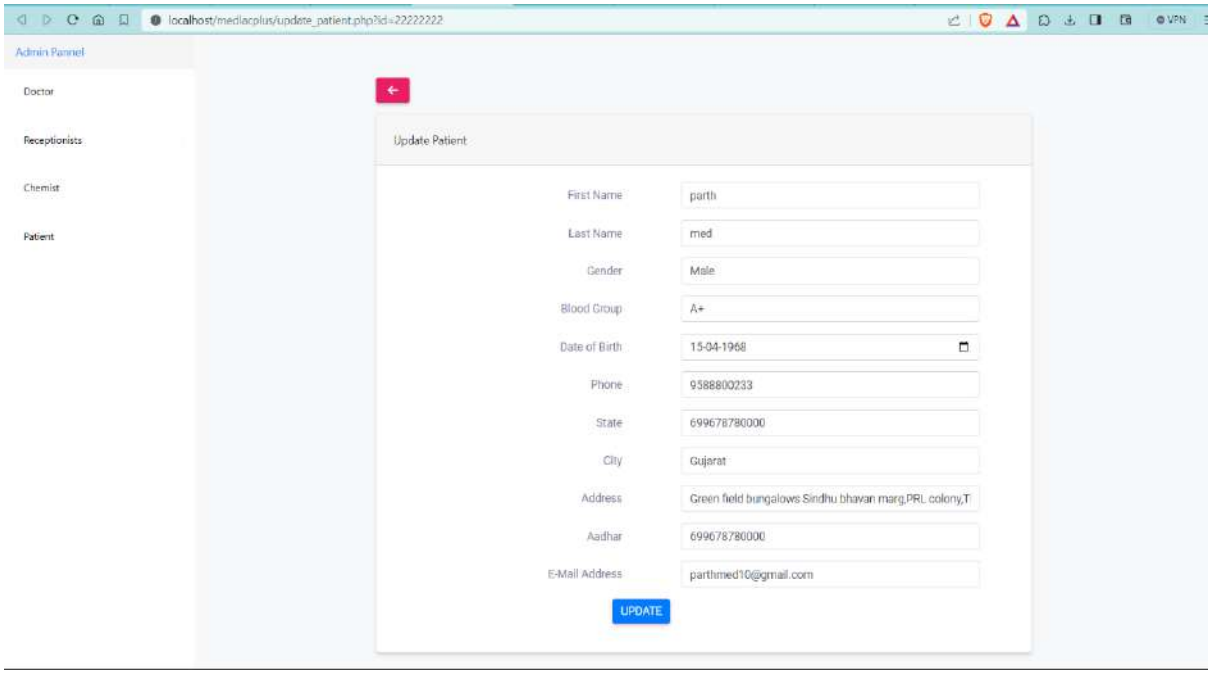
[Figure :View Patient]



[Figure :Add Patient]



[Figure :Patient Validation]



[Figure :Update Patient]

Conclusion

Conclusion on overall. The project has achieved its objectives. **MEDLAC PLUS** system is all about the modernising a hospital through use of technology. Computers help in it and take over the manual system for quick and easy functioning. This hospital management system is a quite the reliable and is proven on many stages. All the basic requirements of the hospital are provided in the hospital in order to manage it perfectly and large amount of data can also be stored. It gives many facilities like searching for the detail of patient, billing facilities as well as the creation of test reports. So it's a important system for modern days. Our software has the facility to give unique id for unique patient and stores details of every patient and staff automatically user can search old details of any registered patients using name or id. Separate Dash Board and reports are also available for users. Doctor can update the patient report after the consultation of that particular patient. Hence all the above details of the respective patient is stored in the Smart Health Card where the prescription prescribed by the Respective Doctor is scanned through the Smart Health Card Reader which is allocated to the respective doctor whereas the prescribed drugs of patient which stored in the Smart Health Cardis scanned and provided by the Chemist. Lastly in case of the Modification & Cancelation of any Patient data is done by the Receptionist.

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[3] HTML

Link: *https://developer.mozilla.org/en-US/docs/Web/HTML*